

Claims

- 1. An audio information support system characterized by comprising:**
an image display device which shows an image;
an audio output device which outputs an electromagnetic wave modulated by audio information toward one or multiple positions in the image shown by the image display device; and
an audio reproducing terminal having a converting means which receives the electromagnetic wave at the position in the image and converts it to an electric signal and an audio reproducing means which reproduces sound from the electric signal generated by the converting means.
- 2. An audio information support system characterized by comprising:**
an image display device which shows an image;
an audio output device which outputs an electromagnetic wave modulated by audio information toward one or multiple positions in the image shown by the image display device;
an audio reproducing terminal having a converting means which receives the electromagnetic wave at the position in the image and converts it to an electric signal, an ID transmitting means which transmits an ID and an audio reproducing means which reproduces sound from the electric signal generated by the converting means; and
an ID detection device which detects the ID transmitted from the ID transmitting means of the audio reproducing terminal.
- 3. An audio information support system characterized by comprising:**
an image display device which shows an image;
an audio output device which outputs an electromagnetic wave modulated by audio information, toward one or multiple positions in the image shown by the image display device;
an audio reproducing terminal having a converting means which receives the electromagnetic wave at the position in the image and converts it to an electric signal and an audio reproducing means which reproduces sound from the electric signal generated by the converting means; and
a position detection device which detects the position of the audio reproducing terminal.
- 4. An audio information support system characterized by comprising:**
an image display device which shows an image;

an audio output device which outputs an electromagnetic wave modulated by audio information toward one or multiple positions in the image shown by the image display device;

an audio reproducing terminal having a converting means which receives the electromagnetic wave at the position in the image and converts it to an electric signal, an audio reproducing means which reproduces the resulting electric signal by the converting means in sound and an ID transmitting means which transmits an ID;

an ID detection device which detects the ID transmitted from the ID transmitting means of the audio reproducing terminal; and

a position detection device which detects the position of the audio reproducing terminal.

5. The audio information support system according to any one of claims 1 to 4, characterized in that the image display device has a screen means which shows an image and an image projecting means which projects an image onto the screen means.

6. The audio information support system according to claim 5, characterized in that the screen means has a flat, curved or irregular image display surface.

7. The audio information support system according to claim 5, characterized in that the screen means has a translucent image display surface.

8. The audio information support system according to claim 5, characterized in that the image projecting means projects an image onto the screen means from the image display surface side.

9. The audio information support system according to claim 5, characterized in that the image projecting means projects an image onto the screen means from opposite side of the image display surface.

10. The audio information support system according to any one of claims 1 to 4, characterized in that the image display device is a cathode-ray tube display.

11. The audio information support system according to any one of claims 1 to 4, characterized in that the image display device is a flat panel display.

12. The audio information support system according to claim 11, characterized in that the flat panel display is any one of a liquid crystal display, a plasma display, an electroluminescent display, a light-emitting diode display, a vacuum fluorescent display, and an electrolytic emission display.

13. The audio information support system according to any one of claims 1 to 4, characterized in that the audio output device has a modulating means in which audio information modulates an electromagnetic wave and an electromagnetic wave irradiating means which emits the electromagnetic wave modulated by the modulating means toward the position in the image.

14. The audio information support system according to claim 13, characterized in that the electromagnetic wave irradiating means has an electromagnetic wave source which outputs an electromagnetic wave.

15. The audio information support system according to claim 14, characterized in that there are a plural of the electromagnetic wave source, each disposed so as to correspond respectively to the multiple positions in the image.

16. The audio information support system according to claim 14, characterized in that there is a single or plural of the electromagnetic wave source that can change an emitting direction toward the multiple positions in the image.

17. The audio information support system according to claim 14, characterized in that the electromagnetic wave source is a light source which outputs light as an electromagnetic wave.

18. The audio information support system according to claim 17, characterized in that the light source is a light-emitting diode or laser.

19. The audio information support system according to claim 17, characterized in that light from the light source is emitted onto the position in the image through an optical cable.

20. The audio information support system according to claim 17, characterized in that the converting means of the audio reproducing terminal is a converting means which receives light from the light source of the electromagnetic wave irradiating means and performs photoelectric conversion.

21. The audio information support system according to claim 20, characterized in that the photoelectric converting means is a solar cell.

22. The audio information support system according to any one of claims 1 to 4, characterized in that the converting means of the audio reproducing terminal can be worn on a part of a terminal user's body.

23. The audio information support system according to claim 22, characterized in that the part of the body is a hand or a foot.

24. The audio information support system according to any one of claims 1 to 4, characterized in that the converting means of the audio reproducing

terminal is mountable on or built in a pointing stick held by a terminal user.

25. The audio information support system according to any one of claims 1 to 4, characterized in that the audio reproducing means of the audio reproducing terminal is an earphone, a headphone, or a speaker.

26. The audio information support system according to any one of claims 1 to 4, characterized in that the audio reproducing terminal is a battery-less terminal that does not need a separate drive power source.

27. The audio information support system according to any one of claims 1 to 4, characterized in that the ID transmitting means of the audio reproducing terminal is an RFID tag and the ID detection device is a reader-writer that conducts communication with the RFID tag for ID authentication.

28. The audio information support system according to any one of claims 1 to 4, characterized in that the ID transmitting means of the audio reproducing terminal is an optical ID tag and the ID detection device is an infrared sensor that receives ID infrared light emitted by the optical ID tag and outputs ID data.

29. The audio information support system according to claim 28, characterized in that:

the optical ID tag has an infrared light source for ID information modulated infrared light, an ID storing means which stores ID data and a modulating means which modulates infrared light by ID data; and

the infrared sensor receives ID information modulated infrared light which has been modulated and transmitted by the optical ID tag, and outputs ID data.

30. The audio information support system according to any one of claims 1 to 4, characterized in that:

the position detection device has an infrared light source for positioning-use infrared light, an infrared imaging means which captures positioning-use infrared light reflected back by the audio reproducing terminal and a position detecting means which detects the position of the audio reproducing terminal based on the position of the infrared light image in the image taken by the infrared imaging means; and

the audio reproducing terminal has a reflecting means which reflects the positioning-use infrared light transmitted from the position detection device.

31. The audio information support system according to any one of claims 1 to 4, characterized in that the position detection device has a touch panel which is disposed on the image display surface of the image display device and a

position detecting means which detects the position of the audio reproducing terminal based on the position where a terminal user touches the touch panel.